



TECHNOLOGY BLUEPRINT FOR MUSHROOM MEDIA COMPRESSOR (MMC)

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TABLE OF CONTENTS

	Page Number
Contents	
<hr/>	
1.0 EXECUTIVE SUMMARY	1
2.0 PRODUCT OR SERVICE DESCRIPTION	2
3.0 TECHNOLOGY DESCRIPTION	5
4.0 MARKET ANALYSIS AND STRATEGIES	7
5.0 MANAGEMENT TEAM	10
6.0 ESTIMATED COST	11
7.0 PROJECT MILESTONES	11
8.0 CONCLUSIONS	12
9.0 APPENDICES	13

1.0 Executive Summary

1.1 Brief Description of the Business and Product Concept

Agricultural sector is one of the most important economy sector in Malaysia and remain as backbone of economy by producing agriculture products for so many years. According of MARDI research centre, mushrooms has been identified as one of the high value commodities under Malaysia's National Agro-Food Policy. The percentage of mushrooms of each state in Malaysia can be seen increase yearly. Most of mushrooms entrepreneur grow the mushrooms starting from scratch or to be specific from the media to grow the mushrooms. There is a lot of steps and skills needed to produce the mushroom media blocks in polybag. During the production of mushroom media polybag, mushroom entrepreneurs encounter the same problem that limit their product efficiency. So, this blueprint describes the machine that can solve this problem which is mushroom media compressor. Mushroom media compressor (MMC) will increase the efficiency of the production by compressing four mushroom media polybags at a time.

1.2 The Target Market and Projections

Basically MMC is targeted to mushroom entrepreneur or farmers that produce their own mushroom media polybag. Most of entrepreneur or farmers who involve in mushrooms sector are producing their own media as it can save their business budget and the quality of the mushroom can be determined. We believe that the increasing of this sector will open the opportunity of product growing not only in Malaysia but also in our neighbor country such as Indonesia and Philippines.

1.3 The Competitive Advantages

Based on our study, there is no competitors yet in this sector since MMC is totally a new product that give the function of compressing mushroom media polybag. MMC is one and only machine with the function stated above in the current market.

1.4 The Profitability

The profit of this MMC was approximately 1% for each unit sale. The estimated price for MMC is RM 1400 and the suggestion for unit sale price is RM 1500.

1.5 The Management Team

The backbone of the production who make sure all the production plan is going smoothly and solve all the issues related to MMC production are general manager, administrative and marketing manager, financial manager and executive manager. Each of the position mentioned here are hire based on their expertise.

2.0 Product or Service Description

2.1 Detail the product or service to be produced/sold

Our company is producing a Mushroom's Media compressor (MMC) which will make the mushroom process much easier and faster. The idea of Mushroom's Media Compressor (MMC) was generated after observing some problems towards the farmers in mushroom farming. The farmer always deals with a problem that is the machine used has no compressor so it is time consuming for the workers. Even by using the machine the human force still need to be use to compressed the polybags in order to force the air out from it since the machine will only help in mixing and bagging the medium. By looking at the problem, our company aim to creat the product that can increase the efficiency of the mushroom process. The aim of creating the product is to increase the efficiency of the mushroom bagging process by letting the mushroom polybag to be compress by the compressor rather than using the human force and therefore we create a practical hand pulley that will compress the polybag and also the material use will be stainless steel. Other than save time and energy used, the product producing performance can increase for 4 times from 1 minute to 3 to 5 seconds.

2.2 Application of product and the primary end use

A problem could rise if person in charge does not properly pressed the polybag leaving the air inside it. This will cause growth of the mushroom mycelium to be stunted and the medium structure to be easily loose. So, the main function of this mushroom media compressor is to compress the mushroom block media that will be used for growing mushroom. In order to so, mushroom block media need to compress to let all air out. All this while, most mushroom farmer need to do it manually by shake it on flat surface for several times and it take for quite some time. Also, the product produce is limited due to time consume factor. However, with the use of this mushroom media compressor, the product producing performance can increase. This mushroom media compressor is designed with four polybags holes which means this machine

can operate one to four polybags for once and it can be done by only pulling the hand pulley downward.

2.3 Unique features of the product or service

This mushroom media compressor consists of four holes that can place four polybags at a time. On top of the main body of polybag holes, there is four compressors that can fit the size and shape of the polybag. It is made according to the size of mushroom's block polybag. Furthermore, there is hand pulley at the right side that will move the compressor down. So, this machine can operate one to four polybags for once and it can be done by only pulling the hand pulley downward. This machine is made from stainless steel. In addition, the innovation of our product can attract the target customer which is the farmer in agriculture industry because the development of the product happens not only in the features but also for the benefits and quality specification. As stated, it can increase the efficiency of the performance by 4 times. Other than that, what makes our product to be interesting is that, it is made according to standard regulation of machine safety. Firstly, the hand pulley is made for user to pull downward. This is to avoid from any finger or hand injury when the compressor moving down to compress the media. Secondly, this machine is design to have no wheel below the stand. This is to avoid machine to move around when in use and cause workplace accident or any possible hazards such as bump into the worker. There is no other mushroom media compressor machine was made before. This is the reason of this machine will stand out in the market.

2.4 The present state of development of the product or service

New product development is defined as a process of creating and designing a new product that later will be introduced into the market. One main component under NPD is research and development (R&D) that can be defined as the process by which company works to obtain new knowledge that might be used to create new technology, products, service or system that will either use or sell. The whole process generally consists of five steps before a full-scale commercialization take place. The process of developing new product can involve the work of inventing something totally new or innovating and improving on existing product. There are involved 5 steps which are idea search, research and development, product design, concept testing, building prototype and test marketing. For our product, we are now at the stage of product design. Product design is the conceptual translation of a new product idea or concept which include the architecture design, aesthetic design as well as the other parameters. In building our product the criteria that taken into consideration are performance, safety in use,